



BARK HILL

PWSID # 0060019

Community Water System • Carroll County, Maryland

2011 Annual Water Quality Report

This is an annual report on the quality of water delivered by the Carroll County Bureau of Utilities, Department of Public Works. This report meets the Federal Safe Drinking Water Act (SDWA) requirement for "Consumer Confidence Reports" and contains information on the source of the water, its constituents, and the health risks associated with any contaminants. Safe water is vital to the community. Please read this report carefully and, if you have questions, call the Bureau of Utilities at 410-386-2164.

Bark Hill 2011 Annual Water Quality Report

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Department of Public Works
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Water Source

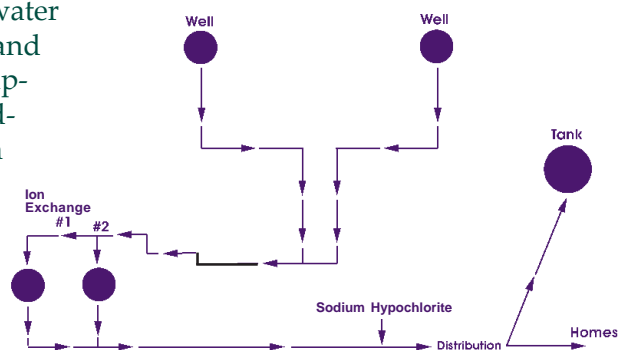
The sources of Bark Hill's community water supply are two groundwater wells. Well K50 is located behind Francis Scott Key High School and supplies 26 gpm. Well K3 is located south of the High School and supplies 60 gpm. Both wells alternate production into the treatment building, where the pumped water feeds into two nitrate, softening Ion Exchange units. Sodium Hypochlorite is then added for disinfection before entering the distribution system, enroute to the 100,000 gallon water storage tank on Raywell Avenue.

A source water assessment was completed for the Carroll County Bureau of Utilities, Department of Public Works in 2000. Copies are available by stopping by, calling or writing the Bureau of Utilities, Carroll County Government, 225 North Center Street, Room 218, Westminster, MD 21157, 410-386-2164.

The susceptibility analysis of Bark Hill's water supply is based on a review of the water quality data, potential sources of contamination, aquifer characteristics, and well integrity. It was determined that Bark Hill's water supply is suscep-

(continued)

Bark Hill Treatment Process



tible to contamination by nitrates but not to other inorganic compounds. The water supply is not susceptible to volatile organic compounds, synthetic organic compounds, bacteria or protozoans.

Important Health Information

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water include:

(A) Microbial Contaminants, such as viruses and bacteria, that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

(B) Inorganic Contaminants, such as salts and metals, which can be naturally-charged, oil and gas production, mining, or farming.

(C) Pesticides and Herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.

(D) Organic Chemical Contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.

(E) Radioactive Contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The EPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

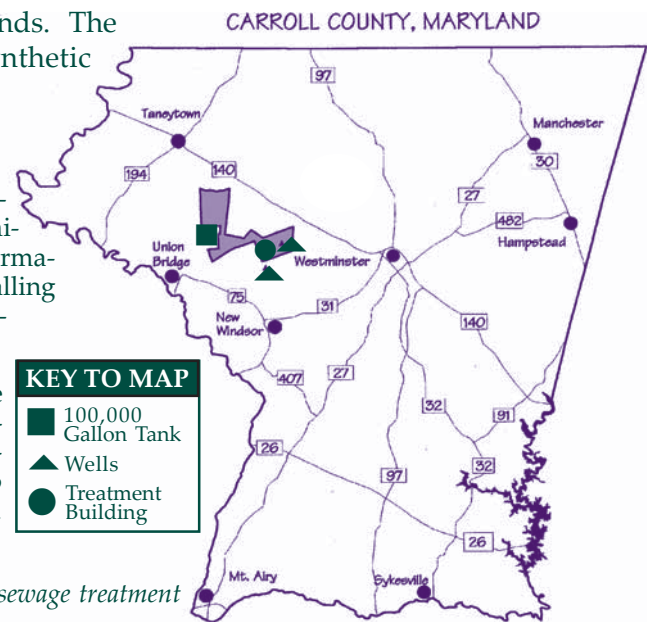
Radon Information

The Bureau of Utilities tested for Radon in 2005. The water showed a Radon quarterly annual average of 981 picocuries per liter (pCi/L). Radon is a radioactive gas that you can't see, taste, or smell. It is found throughout the United States and can move up through the ground and into a home through cracks and holes in the foundation. Radon can build up to high levels in all types of homes. Radon can also get into indoor air when released from tap water from showering, washing dishes, and other household activities. Compared to radon entering the home through soil, radon entering the home through tap water will in most cases be a small source of radon in indoor air. Radon is a known human carcinogen. Breathing air containing radon can lead to lung cancer. Drinking water containing radon may also cause increased risk of stomach cancer. If you are concerned about radon in your home, test the air in your home. Testing is inexpensive and easy. Fix your home if the level of radon in your air is four picocuries per liter of air (pCi/L) or higher. There are simple ways to fix a radon problem that aren't too costly. For additional information, call your State Radon program or call EPA's Radon Hotline (800-SOS-RADON).

Copper and Lead Information

In 2010, the Bureau of Utilities, Department of Public Works tested for Copper and Lead. Test results showed both Copper and Lead to be well below EPA's maximum contaminant level of 1.3 ppm for copper and 15 ppb for lead. (See Water Quality Table)

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The Bureau of Utilities is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your drinking water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the EPA Safe Drinking Water Hotline at 1-800-426-4791 or at <http://www.epa.gov/safewater/lead>.



Water Quality Table

Inorganic Contaminants	Date Tested	MCL	MCLG	Detected Level	Major Sources	Potential health effects from ingestion of water
Copper ¹	2010	AL=1.3ppm	1.3ppm	.16ppm	Corrosion of household plumbing systems; erosion of natural deposits	Short term exposure: Gastrointestinal distress Long term exposure: Liver or Kidney damage
Lead ²	2010	AL=15ppb	0	0ppb	Corrosion of household plumbing systems; erosion of natural deposits	Infants & children: delays in physical or mental development, children could show slight deficits in attention span and learning abilities. Adults: Kidney problems & High blood pressure
Nitrate ³	01/03/11	10ppm	10ppm	4.4ppm	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	Infants below the age of six months who drink water exceeding the MCL, could become seriously ill and if untreated could die. Symptoms include shortness of breath and blue baby syndrome

Disinfectants & Disinfection By-Products	Date Tested	MCL	MCLG	Detected Level	Major Sources	Potential health effects from ingestion of water
Total Trihalomethanes ⁵	10/07/11	80ppb	na	1.8ppb	By-product of drinking water disinfection	Liver, kidney or central nervous system problems, increased risk of cancer
Haloacetic Acids ⁵ (HAA5)	5/5/09	60ppb	na	6.63ppb	By-product of drinking water disinfection	Increased risk of cancer

Secondary Inorganic Chemical Parameters	Date Tested	SMCL	MCLG	Detected Level	Major Sources	Potential health effects from ingestion of water
pH	2011	6.5 - 8.5*pH	na	7.5pH	Erosion of natural deposits; algae blooms	No known health effects

Radioactive Contaminants	Date Tested	MCL	HLD	Major Sources	Potential health effects from ingestion of water
Gross Alpha	12/20/10	15pCi/L	2.4pCi/L	Erosion of natural deposits	Increased risk of cancer
Gross Beta	12/20/10	50 ⁶ pCi/L	4pCi/L	Decay of natural and man-made deposits	Increased risk of cancer

Key to Table

AL = Action Level

MCL = Maximum Contaminant Level

SMCL = Secondary Maximum Contaminant Level

MCLG = Maximum Contaminant Level Goal

TT = Treatment Technique

* Indicates SMCL

pCi/L = picocuries per liter (a measure of radioactivity)

ppm = parts per million, or milligrams per liter (mg/L)

ppb = parts per billion, or micrograms per liter (µg/L)

NTU = Nephelometric Turbidity Units

na = Not Applicable

HLD = Highest Level Detected

Water Quality Table Footnotes

¹ None of the samples tested for copper exceeded the current action level of 1.3 ppm.

² None of the samples tested for lead exceeded the current action level of 15 ppb. [Lead and copper are regulated in a Treatment Technique which requires systems to take tap water samples at sites with lead pipes or copper pipes that have lead solder and/or are served by lead service lines. The action level, which triggers water systems into taking treatment steps if exceeded in more than 10% of tap water samples, for copper is 1.3 mg/L and for lead is 0.015 mg/L.]

³ Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask for advice from your health care provider.

⁴ Although there is no collective MCLG for this contaminant group, there are individual MCLGs for some of the individual contaminants:

- Haloacetic acids: dichloroacetic acid (zero); trichloroacetic acid (0.3 mg/L)
- Trihalomethanes: bromodichloromethane (zero); bromoform (zero); dibromochloromethane (0.06 mg/L)

⁵ The MCL for Gross Beta is 4 millirems per year (a measure of radiation by the body). The EPA considers 50 pCi/L to be the level of concern for Beta particles.

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MTBE (Methyl - Tert - Butyl - Ether) Information

The Maryland department of Environment sampled the Bark Hill well No. 1 (K3) and No. 2 (K50) on 9/2/08, and found that MTBE was present at a value of <.5 ppb. There is currently insufficient data to determine the health risk, if any, from low level exposure to MTBE. EPA's advisory notes that MTBE levels at or below 20 - 40 ppb provides a large margin of safety from toxic effects.

What Does The Water Quality Table Mean?

The table in this report provides representative analytical results of water samples collected in 2009 from our system. The State allows the County to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of the Bark Hill data, though representative, is more than one year old.

Important Drinking Water Definitions

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology, and taking cost into consideration.

Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety, and are non-enforcable public health goals.

Detected Level: The highest level detected of a contaminant for comparison against the acceptance levels for each parameter. These levels could be the highest single measurement, or an average of values depending on the contaminant.

Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

Range: The lowest to the highest values for all samples tested for each contaminant. If only one sample is tested, or no range is required for this report, then no range is listed for that contaminant in the table.

Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.

For additional information, contact Mr. Gregory Wantz, Water Treatment Plant Superintendent, Bureau of Utilities, Department of Public Works, at 410-386-2164; or consult our web site at ccgovernment.carr.org/ccg/util/default.asp. For further information, see U. S. Environmental Protection Agency (EPA) water information at www.epa.gov/safewater/ccr1.html, and www.waterdata.com; or by calling EPA's Safe Drinking Water Hotline at 1-800-426-4791.

Water Quality Data for other community water systems throughout the United States is available at www.waterdata.com.

For billing information, call 410-386-2000, and for Operation and Maintenance inquiries, call 410-386-2164, Monday through Friday from 8:00 a.m. to 5:00 p.m. An answering machine is available after hours.

The Board of Carroll County Commissioners meets regularly with Department staff. The Carroll County Commissioners' weekly agenda is available on the Internet at ccgovernment.carr.org/meetings/index.html or by calling the Commissioners' Office at 410-386-2043. The Carroll County Commissioners welcome and encourage public participation.

Member: American Water Works Association (AWWA)
Chesapeake Section of the American Water Works Association (CSAWWA)
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